

CLAIM AMENDMENTS

1. (Currently Amended) A dental implant comprising:
 - a) a bottommost implant tip located at an apex;
 - b) a root part which has a length, extends to the implant tip ~~(1)~~, is intended to be fitted in a jawbone, and has a parabolic outer contour with the implant tip as a vertex;
 - c) an implant neck adjoining the root part, which extends in ~~the~~ a coronal direction and is intended to lie inside the gingiva; and
 - d) an outer thread having a pitch and provided on the root part, wherein ~~e)~~ the root part has the parabolic outer contour along ~~its entire~~ all of the length (l_{max}) of the root part and as far as a theoretical ridge line at which ~~it~~ the root part adjoins the implant neck.
2. (Currently Amended) The dental implant as claimed in claim 1, wherein
 - ~~a)~~ the outer thread provided on the root part has an outer contour extending parallel to the parabolic outer contour of the root part, and
 - ~~b)~~ ends at a distance of 1 mm to 4 mm from the ridge line.
3. (Currently Amended) The dental implant as claimed in claim 1, wherein
 - a) the root part at the ridge line has a maximum radius ~~(r_{max})~~ extending in ~~the~~ a radial ~~direction; and~~
 - b) the parabolic outer contour, placed in a cartesian system of x-y coordinates, with the implant tip positioned at the origin, follows the equation $l_y = K \cdot 4r_x^2$, where
 - ~~e)~~ l_y represents the ~~respective ordinate~~ a y coordinate value and r_x represents ~~the associated abscissa~~ an x coordinate value; and
 - ~~d)~~ the constant (K) results from the equation ~~$K = l_{max} / 4r_{max}^2$~~ $K = l_{max} / 4r_{max}^2$.
4. (Currently Amended) The dental implant as claimed in claim 3, wherein the maximum radius ~~(r_{max})~~ is between 1 mm and 3 mm.

5. (Currently Amended) The dental implant as claimed in claim 1, wherein

a) the outer thread is self-cutting;

b) the length (l_{max}) of the root part ~~correlates with a pitch (S) of the outer thread and~~
the pitch of the outer thread, for a maximum radius equal to 2 mm, correlate with one another
as follows:

Length (l_{max}) of root part (2) [mm]	Pitch (S) [mm]
6	0.65
8	1
10	1
14	1
16	1

;

c) the outer thread ~~ends at~~ extends a distance, in the a range of from 1 mm to 4 mm,
from the ridge line; ~~with and~~

d) the distance ~~being greater as~~ is proportional to the length (l_{max}) of the root part
increases.

Claim 6 (Cancelled).

7. (Currently Amended) The dental implant as claimed in claim 1, wherein

a) the outer thread includes thread teeth,

~~ab)~~ the thread teeth at the root part extend in the a y- direction, and have a height (e_y)
of about 0.3 mm; and

~~bc)~~ the thread teeth, in the an x-direction, have a length (e_x) in the range of from 0.25
mm to 0.5 mm.

8. (Currently Amended) The dental implant as claimed in claim 7, wherein

a) the root part at the ridge has a maximum radius ~~is of~~ 2 mm;

b) the length (e_x) of the thread teeth ~~decreases as~~ is inversely proportional to the
length (l_{max}) of the root part (2) ~~increases~~; and

c) the outer thread ~~with its thread teeth~~ has the following values:

Length (l_{max}) of root part [mm]	Height (g_n) of thread teeth [mm]	Length (g_n) of thread teeth [mm]
6	0.3	0.4
8	0.3	0.4
10	0.3	0.3
14	0.3	0.25
16	0.3	0.25

9. (Currently Amended) The dental implant as claimed in claim 1, wherein

- the implant is made of biocompatible material; and
- the root part has a rough surface which is coated by one chosen from the group consisting of plasma-coated or coating, ceramic-coated or is treated chemically electrochemically, mechanically or by coating, chemical treatment, electrochemical treatment, mechanical treatment, and laser treatment.

10. (Currently Amended) The dental implant as claimed in claim 1, wherein the implant neck ~~a) is polished and is made of a material selected from the group consisting of titanium, a titanium-based alloy or another a biocompatible metal or its, and a biocompatible metal alloy and is polished; or b) is coated with ceramic, glass ceramic, ceramic-like material, hydroxyapatite, plastic or metal other than titanium-based alloys.~~

11 (Currently Amended) The dental implant as claimed in 1, wherein

- measured in ~~the~~ a y-direction, the implant neck has a height (h) in the range of from 1 mm to 3 mm; and
- the implant neck is cylindrical ~~or is widened or narrowed in a trumpet shape or conically~~ in the coronal direction.

12. (Previously Presented) The dental implant as claimed in claim 4, wherein the maximum radius is from about 1.5 mm to about 2 mm.

13. (Currently Amended) The dental implant as claimed in claim 9, wherein the biocompatible material ~~comprises~~ is selected from the group consisting of titanium-based alloys, metals, metal alloys other than titanium-based alloys, ceramic, glass ceramic, ceramic-like material or and plastic.

14. (New) The dental implant as claimed in claim 1, wherein the implant neck is polished and coated with a material selected from the group consisting of ceramic, glass ceramic, hydroxyapatite, plastic, and metal.

15. (New) The dental implant as claimed in 1, wherein

a) measured in a y-direction, the implant neck has a height in the range from 1 mm to 3 mm; and

b) the implant neck has a dimension transverse to the coronal direction that changes in the coronal direction.